CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

THIRD REVISION OF MONITORING AND REPORTING PROGRAM NO. 93-236

FOR
SPANISH FLAT WATER DISTRICT
MONTICELLO CEMETERY DISTRICT
AND NAPA COUNTY
SPANISH FLAT WASTEWATER TREATMENT AND DISPOSAL FACILITY
NAPA COUNTY

This Monitoring and Reporting Program (MRP) rescinds and replaces the Second Revision of MRP No. 93-236. The MRP incorporates requirements for monitoring of the wastewater treatment facility. This MRP is issued pursuant to Water Code Section 13267. The Staff Report (attached) provides the report requirements in this MRP. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Regional Board or the Executive Officer.

All wastewater samples should be representative of the volume and nature of the discharge. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form. Process wastewater flow monitoring shall be conducted continuously using a flow meter and shall be reported in cumulative gallons per day.

Field test instruments (such as pH and dissolved oxygen) may be used provided that:

1. The operator is trained in the proper use of the instrument;
2. The instruments are field calibrated prior to each monitoring event;
3. Instruments are serviced and/or calibrated per manufacturer's recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

INFLUENT MONITORING

Influent samples shall be collected just prior to the package treatment plant. Influent monitoring shall consist of the following:

Constituents	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Flow	gpd	Continuous Meter	Daily	Monthly
BOD_5[1]	gpd	Grab	Monthly	Monthly

[1] 5-day, 20°C Biochemical Oxygen Demand.

EFFLUENT MONITORING

Effluent samples shall be collected from the pipeline that discharges to the evaporation/percolation pond. Effluent monitoring shall include at least the following:

Constituents	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Total Coliform Organisms [1]	MPN/100 mL[2]	Grab	Weekly	Monthly
BOD_5 [3]	mg/L	Grab	Twice Monthly	Monthly
Settleable Solids	mg/L	Grab	Monthly	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly	Monthly
Nitrate as Nitrogen	mg/L	Grab	Monthly	Monthly
Total Kjeldahl Nitrogen	mg/L	Grab	Monthly	Monthly
Standard Minerals[4]	mg/L	Grab	Annually	Annually

1 Using a minimum of 10 tubes or two dilutions.
2 Most probable number per 100 ml.
3 5-day, 20°C Biochemical Oxygen Demand.
4 Standard Minerals shall include the following: boron, calcium, iron, manganese, magnesium, potassium, sodium, chloride, total alkalinity (including alkalinity series), and hardness.

POND MONITORING

The percolation/evaporation pond shall be monitored for the parameters specified below. Freeboard shall be measured vertically from the surface of the pond water to the lowest elevation of the surrounding levee and shall be measured to the nearest 0.1 feet.

Constituents	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Dissolved Oxygen[1,4]	mg/L	Grab	Weekly	Monthly
pH[4]	pH units	Grab	Weekly	Monthly
Freeboard	0.1 feet	Observation	Weekly	Monthly
Berm Seepage[2]	NA	Observation	Weekly	Monthly
Odors[3]	--	Observation	Weekly	Monthly

1 Samples shall be collected at a depth of one foot from each pond in use, opposite the inlet. Samples shall be collected between 0700 and 0900 hours.
2 Reservoir containment levees shall be observed for signs of seepage or surfacing water along the exterior toe of the levees and dam. If surfacing water is found, then a sample shall be collected and tested for total coliform organisms and total dissolved solids.
3 The presence of strong or unusual odors shall be reported.
4 Hand held meter may be used.

DISPOSAL AREA MONITORING

The following Disposal Area Monitoring shall be required only if wastewater has been delivered to either area during the monthly reporting period. If no disposal has taken place that month, the monitoring report shall so state.

Monitoring of the two disposal areas shall be conducted **daily** and the results shall be included in the monthly monitoring report. Evidence of erosion, saturation, irrigation runoff, or the presence of nuisance conditions shall be noted in the report. Effluent monitoring results shall be used in calculations to ascertain loading rates at the application area. Monitoring of the disposal area shall include the following:

Constituents	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Flow	Gallons	Meter	Daily	Monthly
Local Rainfall	Inches	Measurement	Daily	Monthly
Acreage Applied[1]	Acres	Calculated	Daily	Monthly
Application Rate[2]	gal/acre/day	Calculated	Daily	Monthly
BOD_5 Loading Rate[2]	lbs/acre/day[3]	Calculated	Monthly	Monthly
Total Nitrogen Loading Rate[2]	lbs/acre/month[3]	Calculated	Monthly	Monthly
Total Dissolved Solids Loading Rate[2]	lbs/acre/month[3]	Calculated	Monthly	Monthly

[1] Land application areas shall be identified.
[2] For each land application area.
[2] Report monthly total and cumulative annual to date.

The entire irrigated areas shall be inspected weekly during or immediately following an irrigation event to identify any equipment malfunction or other circumstances that might allow irrigation runoff to leave the irrigation area and/or create ponding conditions that violate the Waste Discharge Requirements. A log of these inspections shall be kept at the facility and made available for review upon request.

SLUDGE MONITORING

In accordance with EPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989, a composite sample of sludge shall be collected when removed from the evaporation/percolation pond and tested for the following metals:

Cadmium	Copper	Nickel
Chromium	Lead	Zinc

Sampling records shall be retained for a minimum of five years. A log shall be kept of sludge quantities generated and of handling and disposal activities. The frequency of entries is discretionary; however, the log should be complete enough to serve as a basis for part of the annual report.

GROUNDWATER MONITORING

By **1 November 2006**, the Discharger shall submit the name of the California Registered Professional that will prepare the two reports listed below.

By **1 March 2007,** the Discharger shall submit a Groundwater Monitoring Well Installation Workplan prepared in accordance with, and including the items listed in, the first section of the attached *"Items to be Included in a Monitoring Well Installation Workplan and Monitoring Well Installation Report of Results."* The workplan shall describe a groundwater monitoring network consisting of at least three wells around the storage pond specifically designed to ensure that background groundwater quality is adequately characterized and any potential water quality impacts from the discharge are detected. One of the three wells may consist of the County Maintenance Yard well, if the workplan provides details showing that the well is adequate to monitor the storage pond or background groundwater quality. The system shall be designed to yield samples representative of the uppermost portion of the first aquifer underlying the facility site. The workplan shall also include a Sampling and Analysis Plan (SAP) that includes all information listed in the second section of the attachment to this MRP.

By **1 October 2007**, the Discharger shall submit a Well Installation Report that presents well construction, well development, and well surveying details, and as well as any soil sampling details, and contains the information listed in the second section of the attachment to this MRP.

The groundwater monitoring program shall begin in the **fourth quarter of 2007**. Samples shall be collected from all groundwater monitoring wells at the facility. Prior to construction of any new groundwater monitoring wells, the Discharger shall submit plans and specifications to the Regional Board for review and approval. Once installed, all new wells shall be added to the MRP and shall be sampled and analyzed according to the schedule below.

Prior to sampling, the groundwater elevations shall be measured and the wells shall be purged at least three well volumes until temperature, pH and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Samples shall be collected using standard EPA methods. Groundwater monitoring shall include, at a minimum, the following:

Constituents	Units	Type of Sample	Sampling Frequency	Reporting Frequency[3]
Depth to Groundwater	0.01 feet	Measurement	Quarterly	Quarterly
Groundwater Elevation[1]	0.01 feet	Calculated	Quarterly	Quarterly
Gradient	feet/feet	Calculated	Quarterly	Quarterly
Gradient Direction	Degrees	Calculated	Quarterly	Quarterly
Total Coliform Organisms	MPN/100 mL	Grab	Quarterly	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly	Quarterly
Nitrate as Nitrogen	mg/L	Grab	Quarterly	Quarterly
Total Kjeldahl Nitrogen	mg/L	Grab	Quarterly	Quarterly

Standard Minerals[2]	mg/L	Grab	Annually	Annually

[1] Groundwater elevation shall be determined based on depth-to-water measurements from a surveyed measuring point elevation on the well.
[2] Standard Minerals shall include the following: boron, calcium, iron, manganese, magnesium, potassium, sodium, chloride, total alkalinity (including alkalinity series), and hardness.
[3] Beginning with the fourth quarter 2007

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., process wastewater effluent, groundwater well, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all Quarterly Groundwater Monitoring Reports and the annual groundwater evaluation shall be prepared under the direct supervision of a Registered Engineer or Geologist and signed by the registered professional.

Section 13267 of the California Water Code state in part: (b)(1) *In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports.*

Section 13268 of the California Water Code states in part: *(a) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of Section 13267, or failing or refusing to furnish a statement of compliance as required by subdivision (b) of Section 13399.2, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b).*

(b)(1) Civil liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with Section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs.

The Discharger owns and operates the facility that discharges waste subject to WDRs Order No. 93-236. The following reports are required to ensure compliance with the WDRs and the Revised MRP. Pursuant to Section 13267 of the California Water Code, the Discharger shall submit the following reports (as well as the above groundwater monitoring workplan and installation report) by the specified due dates:

A. Monthly Monitoring Reports

Monthly reports shall be submitted to the Regional Board by the **1st day of the second month** following the end of the reporting period (i.e. the August monthly report is due by 1 October). The monthly reports shall include the following:

1. Results of influent, effluent, pond, and disposal area monitoring;
2. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements. Data shall be presented in tabular format;
3. If requested by staff, copies of laboratory analytical report(s); and
4. A calibration log verifying calibration of all hand held monitoring instruments and devices used to comply with the prescribed monitoring program;

B. Quarterly Monitoring Reports

Beginning with the **fourth quarter of 2007**, the Discharger shall establish a quarterly sampling schedule for groundwater monitoring such that samples are obtained approximately every three months. Quarterly monitoring reports shall be submitted to the Regional Board by the **1st day of the second month after the quarter** (i.e. the January-March quarterly report is due by May 1st) and may be combined with the monthly report. The Quarterly Report shall include the following:

1. Results of groundwater monitoring;
2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities. The narrative shall be sufficiently detailed to verify compliance with the WDRs, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of the casing volume; and total volume of water purged;
3. Calculation of groundwater elevations, an assessment of the groundwater flow direction and gradient on the date of measurement, comparison to previous flow direction and gradient data, and discussion of seasonal trends, if any;
4. A narrative discussion of the analytical results for all media and locations monitored, including spatial and temporal trends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);
5. A comparison of monitoring data to the discharge specifications, groundwater limitations, and surface water limitations, and explanation of any violation of those requirements;

6. Summary data tables of historical and current water table elevations and analytical results;

7. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and other sampling stations, and groundwater elevation contours referenced to mean sea level datum; and

8. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Monitoring Reports

An Annual Report shall be prepared as the fourth quarter monitoring report and shall include all monitoring data required in the monthly/quarterly schedule. The Annual Report shall be submitted to the Regional Board by **1 February of each year** and shall include the following:

1. The contents of the regular groundwater monitoring report for the last sampling event of the year;

2. If requested by staff, tabular and graphical summaries of all data collected during the year;

3. Data for the effluent and groundwater monitoring performed on an annual basis;

4. An evaluation of the groundwater quality beneath the facility;

5. A discussion of whether sludge was removed from the pond, and if so, the results of the sampling;

6. An evaluation of the performance of the wastewater treatment system, as well as a forecast of the flows anticipated in the next year;

7. Verification of appropriate employee training for all personnel involved in operation and maintenance of wastewater treatment system;

8. A discussion of compliance and the corrective action taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements; and

9. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.

A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter

shall contain a statement by the discharger, or the discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate and complete.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on _____.

_____
PAMELA C. CREEDON, Executive Officer

Attachment: Items to be Included in a Monitoring Well Installation Workplan and Monitoring Well Installation Report of Results
2006 Staff Report

GJC/WSW: 1 September 2006